

1. A method of correcting at least one parameter to be corrected  $p_c$  of a complex digital signal ( $s_{er}$ ,  $d$ ) characterized in that it comprises the following steps:

- the decomposition of the signal into two signals, envelope ( $e_{er}$ ) and phase ( $p_{er}$ ),
- the determination of the corrector  $c$  to be applied to the parameter of the envelope by searching for the minimum out-of-band noise powers ( $N_h$ ) of the signal.

10 2. A loop for correcting at least one parameter to be corrected  $p_c$  of a complex digital signal ( $s_{er}$ ,  $d$ ) comprising:

- 15 - an input on which it receives the digital signal ( $s_{er}$ ,  $d$ ),
- a calculation system linked directly or indirectly to this input,
- a correction device (68') intended to be deployed
- 20 in a chain for processing the digital signal, and linked to the calculation system which provides it with at least one corrector ( $c$ ),
- characterized in that the calculation system is configured in such a way that it comprises:
- 25 - means of decomposition (64) of the signal into two signals, envelope ( $e_{er}$ ) and phase ( $p_{er}$ ), and
- means of determining (67') the corrector  $c$  to be applied to each parameter to be corrected ( $p_c$ ) of the envelope by searching for the minimum out-of-band noise
- 30 powers ( $N_h$ ) of the signal.

35 3. The correction loop as claimed in the preceding claim characterized in that the input is the only input.

4. The correction loop as claimed in one of claims 2 or 3 characterized in that the parameters to be corrected ( $p_c$ ) comprise a delay and the correctors ( $c$ ) comprise an inverse delay.

5. The correction loop as claimed in one of claims 2  
to 4 characterized in that the parameters to be  
corrected ( $p_c$ ) comprise an offset of the envelope  
5 signal with respect to the phase signal of the digital  
signal and the correctors (c) comprise an inverse  
offset.

10 6. The correction loop as claimed in one of claims 2  
to 5 characterized in that the parameters to be  
corrected ( $p_c$ ) comprise a nonlinearity of the envelope  
signal, and the correctors (c) comprise a  
precorrection.

15 7. The correction loop as claimed in any one of  
claims 2 to 6 characterized in that the digital signal  
is a modulated digital signal ( $S_{RF}$ ) and in that the loop  
comprises:

- a demodulator (61) between the input and the  
20 calculation system,
- a correction device (68') intended to be deployed  
in a modulator (30) with which the demodulator (61) is  
associated.

25 8. A transmitter comprising a modulator (30) and the  
correction loop (60) as claimed in the preceding claim.

9. The transmitter as claimed in the preceding claim  
characterized in that it is a linear transmitter.  
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10. The transmitter as claimed in claim 8  
characterized in that it comprises separate means of  
processing (32, 33) of the phase and of the envelope of  
the modulated digital signal.

35 11. The transmitter as claimed in the preceding claim  
characterized in that the modulator (30) implements the  
method of Kahn.

12. The use of the transmitter as claimed in any one of claims 8 to 11 for the radiobroadcasting or telebroadcasting of digital signals.